

REMARKS

Claims 1-13, 15, 17, 21-26 and 30-35 are pending in the application. Claims 1, 21, 30, 33 and 34 are independent claims. Claims 1-13, 15, 17, 21-26 and 30-35 stand rejected. Claim 33 is cancelled herewith.

Examiner Interview

Applicant's representative thanks the examiner for the courtesy extended in the telephonic interview of March 7, 2008. Applicants representative and examiner discussed the substance of the remarks essentially as described herein. In particular, the examiner requested that the response further clarify "spectral properties" as claimed herein to distinguish from the cited references.

Claim Rejections - 35 USC § 101

Claim 33 stands rejected under 35 USC § 101. Applicants have cancelled claim 33 and submit that the rejection is moot.

Claim Rejections - 35 USC § 102

Claims 30-33 stand rejected under 35 U.S.C. 102(e) as being clearly anticipated by Gjerdingen.

Regarding claim 30, the examiner mapped claim elements to Gjerdingen as follows:

a classification chain data structure stored thereon having a plurality of classification vectors, wherein each vector includes data representative of a spectral properties class as classified by humans and spectral properties characteristics as determined by digital signal processing; and (Col. 3, lines 23-61 and Col. 9, lines 28-39)

processing means for comparing an unclassified media entity to the classification chain data structure to determine an estimate of the spectral properties class of the unclassified media entity. (Col. 6, line 38 - Col. 7, line 2).

However, a careful review of the cited portion of Gjerdingen demonstrates that it does not teach *spectral properties that are classified by humans* that are in turn used in comparing an “unclassified media entity to a classification chain” but rather teaches that:

Listener perception data 401, Instrument information data 402, Expert Information data 403, and Explicit Pairwise data 403A are collected and then stored as Acquired data 404 and thereafter fed into a Research database 405 (also referred as "R&D database"). Basic music fact data 402A, including title of the music, category/genre if known, and date of 2 recording etc. is also sent to R&D database 405. Data describing music attributes may also be collected by Digital Signal processing ("DSP") and stored as DSP data 403B, Radio logging and stored as Radio logged data 403D, and Internet Harvesting and stored Internet Harvested data 403E, using Spider techniques.

In other words, the cited portion of Gjerdingen teaches that a particular music sample *is classified* by humans and then that music is for comparison to similar music. The spectral properties as claimed are described in the specification, for example, on page 8, lines 17-20, page 9, lines 10-18, and page 20, lines 19-30.

The examiner further maintains that:

Gjerdingen teaches a computing system with these features to create a searchable database. Gjerdingen teaches either human or machine classification (Fig. 4, items, 401, 403 and 403B and col. 6, lines 38-64).

As noted above, the claim doesn't simply require human or machine classification. It requires a particular classification wherein a previously unclassified media entity is compared to a chain of spectral properties. The spectral properties were classified by humans and by digital signal processing techniques. Those representative sets of spectral properties then form the basis against which unclassified media is compared.

For at least the foregoing reasons, Applicants submit that claim 30 patentably defines over Gjerdingen and respectfully request reconsideration of the rejection.

Regarding the rejection of claim 33, Applicants have cancelled claim 33 and submit that the rejection with respect to it is moot.

Inasmuch as, claims 31 and 32 depend from claim 30, Applicants respectfully submits that they also patentably define over Gjerdingen for at least the reasons set forth above and request reconsideration and withdrawal of the rejection.

Claim Rejections - 35 USC § 103

Claims 1-13, and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Blum and Kjaer, U.S. Pat. No. 4,603,386.

Claim 1 recites, in part:

comparing the spectral feature vector to a classification chain
containing pre-classified entries to determine at least one
classification of the audio data.

The examiner maintains that Blum teaches this limitation by citation to Column 21, line 55 - Column 22, line 20 and Column 23, line 56 - Column 24, line 7 of Blum. However, Applicants submit that the claim requires the comparison of the claimed “spectral feature vector” to the classification chain and not just a segment of sound, which, as Applicants understand it, is the system of Blum. Moreover, the claim has been further amended to recite “wherein the classification chain data comprises a plurality of classification vectors, wherein each vector includes data representative of a spectral properties class as classified by humans and spectral properties characteristics as determined by digital signal processing.” Neither Blum nor Kjaer teach this further limitation. For at least the foregoing reasons, Applicants respectfully request reconsideration of the rejection of claim 1.

Inasmuch as claims 2-13 and 15 depend from claim 1, Applicants submit that they also patentably define over Blum in view of Kjaer for at least the same reasons.

Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Blum and Kjaer as applied to claim 1 above and further in view of Gjerdingen.

Inasmuch as claim 17 depends from claim 1, Applicants submit that they also patentably define over Blum in view of Kjaer and further in view of Gjerdingen for at least the same reasons.

Claims 21-26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Blum and Gjerdingen.

Independent claim 21 has been amended to clarify the distinction over the prior art. For example, as now recited in claim 21:

wherein the classification chain data comprises a plurality of classification vectors, wherein each vector includes data representative of a spectral properties class as classified by humans and spectral properties characteristics as determined by digital signal processing

As indicated above, Applicants submit that Blum does not teach the combination of human and digital signal processing characteristics as claimed. As such, Applicants submit that claims 21-26 patentably define over Blum in combination with Gjerdingen and respectfully request reconsideration of the rejection.

Claims 34 and 35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Blum in view of Gjerdingen and Bahl et al., US 6,058,205 (hereinafter Bahl). Regarding claim 34, the examiner maintains in part that Blum teaches a method for classifying audio data according to its spectral properties, comprising:

classifying by human experts each entry of a representative set of sounds according to their spectral perceptual qualities

Citing to Blum column 3, lines 30-33. Applicants submit that the examiner is correct in that the cited portion of Blum teaches that users create classes. However, the claim also requires:

reducing the results to a set of numbers called the characteristic vector of each sound

For that element, the examiner cites to Blum column 6, lines 24-52. But that portion of Blum teaches nothing of reducing the human expert classification of spectral perceptual properties to a characteristic vector as claimed. The examiner maintains that Gjerdingen teaches a similar classification method and specifically teaches the use of an expert user's

DOCKET NO.: MSFT-0582/167509.02
Application No.: 09/935,349
Office Action Dated: December 12, 2007

PATENT

opinion for creating "classes," citing column 3, lines 44-61 of Gjerdingen. However, a review of the relevant portion of Gjerdingen demonstrates that it merely teaches that a particular sample of music is classified by an expert so that it can later be found in a search by a user. Applicants submit that it does not teach that an expert classification of spectral perceptual properties are used for classifying unclassified sound as is claimed.

For at least the foregoing reason, Applicants submit that claims 34 and 35 patentably define over Blum in view of Gjerdingen and Bahl et al.

CONCLUSION

In the view of the foregoing amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the application for any reason, the Examiner is encouraged to contact Applicants' representative.

Date: March 12, 2008

/Michael J. Swope/
Michael J. Swope
Registration No. 38,041

Woodcock Washburn LLP
Cira Centre
2929 Arch Street, 12th Floor
Philadelphia, PA 19104-2891
Telephone: (215) 568-3100
Facsimile: (215) 568-3439